

Appl. No. «Case\_\_AppSerialNumber»  
Amdt. dated May 3, 2011  
Reply to Office Action of February 3, 2011

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. *(Currently amended)* A cathode material for a secondary battery containing a cathode active material represented by a general formula  $\text{Li}_n\text{FePO}_4$  (wherein  $n$  ~~represents a number from 0 to equals~~ 1) as a primary component, one or more metal elements selected from the group consisting of vanadium (V), chromium (Cr), copper (Cu), zinc (Zn), indium (In), tin (Sn), molybdenum (Mo), and titanium (Ti) ~~metal elements belonging to Group 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table~~, the total content of which metal element is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and a halogen element in an amount of 0.1 mol% or more based on P and in a molar concentration of up to twice that of the metal element or elements.

2. *(Canceled)*

3. *(Canceled)*

4. *(Currently amended)* A cathode material for a secondary battery, synthesized so as to contain a cathode active material represented by a general formula  $\text{Li}_n\text{FePO}_4$  (wherein  $n$  ~~equals~~ ~~represents a number from 0 to~~ 1) as a primary component, one or more metal elements selected from the group consisting of vanadium (V), chromium (Cr), copper (Cu), zinc (Zn), indium (In), tin (Sn), molybdenum (Mo), and titanium (Ti) ~~metal elements belonging to Group 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table~~, and a halogen element, by mixing a halide

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or halides of the metal element or elements with the ingredients of the cathode active material represented by the general formula  $\text{Li}_n\text{FePO}_4$ , and then calcining the mixture, wherein the total content of the metal element or elements is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and the halogen element is contained in an amount of 0.1 mol% or more based on P and in a molar concentration of up to twice that of the metal element or elements.

5. **(Currently amended)** The cathode material for a secondary battery according to ~~any one of~~ claims 1, 2 or 4, further comprising conductive carbon deposited on the surface thereof.

6. **(Currently amended)** A method for producing a cathode material for a secondary battery, synthesized so as to contain a cathode active material represented by a general formula  $\text{Li}_n\text{FePO}_4$  (wherein n equals ~~represents a number from 0 to 1~~) as a primary component, one or more metal elements selected from the group consisting of vanadium (V), chromium (Cr), copper (Cu), zinc (Zn), indium (In), tin (Sn), molybdenum (Mo), and titanium (Ti) ~~metal elements belonging to Groups 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table,~~ and a halogen element, the method comprising:

mixing the ingredients of the cathode active material  $\text{Li}_n\text{FePO}_4$  with a halide of at least one of the metal elements to obtain a calcination precursor, and then calcining the calcination precursor to composite the cathode active material with the metal element or elements, wherein the total content of the metal element or elements is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and the halogen element is contained

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in an amount of 0.1 mol% or more based on P and in a molar concentration of up to twice that of the metal element or elements.

7. *(Previously presented)* The method for producing a cathode material for a secondary battery according to claim 6, wherein the calcination step has a first stage in a temperature range that is risen from room temperature to a temperature between 300-°C and 450°C, and a second stage in a temperature range of room temperature to the calcination completion temperature, and wherein the second stage of the calcination step is carried out after addition of a substance from which conductive carbon is formed by pyrolysis to the product of the first stage of the calcination step.

8. *(Canceled)*

9. *(Previously presented)* The method for producing a cathode material for a secondary battery according to claim 7, wherein the substance from which conductive carbon is formed by pyrolysis is a bitumen or a saccharide.

10. *(Currently amended)* A secondary battery containing the cathode material according to ~~any one of~~ claims 1, 2, or 4 as a constituent element.

11. *(Canceled)*

12. *(Canceled)*

13. *(Canceled)*

14. *(Previously presented)* A secondary battery containing the cathode material according to claim 5 as a constituent element.